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Anti-Coincidence Detector (ACD) Configuration Management Plan

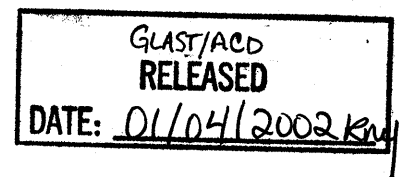
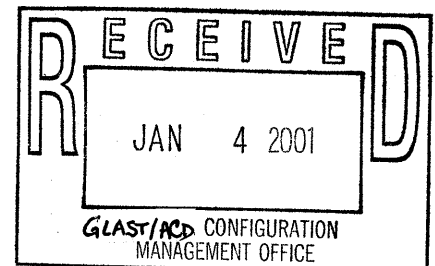
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ANTI-COINCIDENT DETECTOR (ACD) CONFIGURATION MANAGEMENT PLAN

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Prepared by:

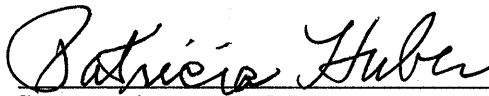

Configuration Management
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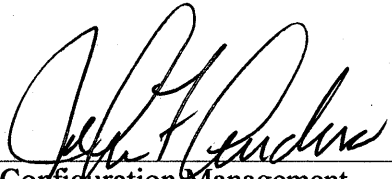

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1/4/02
Date

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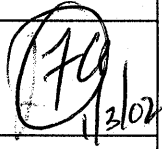

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Anti-Coincident Detector (ACD) CM Plan

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| - | Baseline Release of Document | | 01/03/2002 |  |
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1.0 **Introduction**

This plan defines and describes the system to be used to implement Configuration Management (CM) for the design and development of flight hardware and/or software for the Anti-Coincident Detector (ACD) Instrument.

This CM system is the means by which all Contract End Items (CEIs) are to be documented and controlled, and defines a process which is intended to ensure that all proposed and actual technical and programmatic changes to ACD hardware and software and associated documents and drawings shall be systematically evaluated for validity, merit, need, and impact.

The identification of the instrument configuration is baselined progressively by approving technical documentation at selected times during the development process. This plan establishes the framework for the implementation and verification of all approved configuration baselines and changes to those baselines. Changes to approved baselines are formally controlled through the Configuration Control Board (CCB).

1.1 **Objectives**

The objectives of this plan are to define and to describe the CM system to be implemented during the development of ACD flight hardware.

The CM system functions defined are as follows:

- Configuration Identification
- Configuration Control
- Configuration Accounting and Reporting
- Configuration Verification

This CM system provides the means by which the ACD Instrument Manager (IM) may effectively assess and control all proposed changes to flight program documentation (contracts, statements of work, specifications, plans, procedures, drawings, etc.) that may affect form, fit, or function and all changes that may impact performance, cost, or schedule.

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1.2 Scope

This plan establishes the requirements and control for a CM system which meets the intent of GMI 8040.1A. This document is applicable to all ACD contracts and agreements, and all codes or agencies who have signed a Memorandum of Understanding (MOU) with GSFC for joint development of flight hardware. This plan also applies to the system level Bench Checkout Equipment (BCE), flight and BCE software.

1.3 Applicable Documents

The following documents are applicable to this plan. In the event of a conflict between this plan and the referenced documents, the instruction in this plan apply.

NASA/GSFC

GMI 8040.1A

"Configuration Management (CM)"

X-673-64-IF

"Engineering Drawing Standards Manual"

2.0 ACD Instrument Manager

The ACD IM will chair the Configuration Control Board (CCB), appoint standing and ad hoc CCB members, and establish subordinate CCBs at subsystem levels as he deems necessary. The ACD IM authorizes the establishment of baselines and evaluates the recommendations of the CCB, dispositioning changes, and determining the level of approval required. The day-to-day implementation of CM for ACD flight hardware is delegated to a CM contractor who shall ensure that CM practices by all GSFC organizations and contractors meet the intent of GMI 8040.1A.

2.1 ACD Configuration Management Officer

The ACD Configuration Management Officer (CMO) will serve as the central point of contact for all CM processes. The responsibilities of the CMO are detailed in Appendix A.

2.2 ACD Configuration Control Board

The purpose of the ACD CCB is to determine the impact of proposed changes on the program and to recommend approval/disapproval to the Chairperson of the CCB. The membership and responsibilities of the CCB are defined and established in Appendix B.

The ACD IM may disposition a Configuration Change Request (CCR) without convening the formal CCB when time constraints do not permit a formal review, or no further inputs are required for a proposed change. Informational copies of changes processed "out of board" will be sent to the CCB membership and to impacted team members by the ACD Instrument CMO. Emergency CCBs may also be scheduled, if necessary.

2.3 GSFC Supporting Organizations and Contractor Support

All GSFC organizations supporting the ACD Instrument program shall comply with the CM processes detailed in this plan. The CM requirements for supporting organizations are outlined in Appendix C. Contractors shall comply with the ACD CM requirements as specified in the contractual Statement of Work (SOW). The CM requirements for Contractor organizations are outlined in Appendix D.

3.0 Configuration Identification

Configuration identification is the ongoing process of identifying and documenting the ACD instrument's functional and physical characteristics, from initial specification through design, development, fabrication, test, and delivery to the spacecraft. Configuration identification provides unique identity to the complete configuration documentation as well as the instrument itself. Documentation includes all specifications, test procedures, drawings, and data lists, which define or support the instrument and approved changes thereto. Configuration identification further includes physical part numbering and serialization of parts, subassemblies, and assemblies.

3.1 Configuration Items

Configuration Item (CI) is the designation applied to the aggregation of the instrument's hardware product(s), or any of its discrete portions, that have been designated subject to configuration management requirements and procedures that satisfy an end use function.

3.2 Configuration Baseline

Configuration baseline is the point at which configuration documentation is considered "frozen" during the developmental lifecycle of each CI. Baseline documentation initiates formal configuration control, and changes to that documentation must be tracked and approved. Baseline documentation includes, but is not limited to, Specifications, Interface Requirements Documents (IRDs), Performance Assurance Requirements (PARs), Functional Requirements Documents (FRDs), drawings, test documentation and any other documentation that makes up the instrument baseline.

4.0 Configuration Change Control

Configuration change control is the systematic evaluation and disposition of all proposed changes to the established baseline of the instrument. The ACD CCB members review and determine any impact that could result from the change and recommend approval or disapproval of the change to the CCB Chairperson, who has final authority to disposition the change.

4.1 Configuration Control Levels

The ACD Program has a multi-level CCB, as shown in Figure 3. Each CCB has the authority to disposition changes for which it has responsibility. Changes, which affect requirements at a higher level, will be submitted, with recommendations, to the next higher level CCB for disposition.

4.1.1 ACD CCB

The ACD CCB shall be chaired by the ACD IM and shall meet at his direction to evaluate all CCRs submitted to the board. The CCB is responsible for all changes affecting functional performance, form, fit, the spacecraft interface, cost and/or schedule.

4.2 Configuration Changes

Changes to baselined instrument documentation are initiated by submittal of a CCR to the ACD Instrument Program CCB, through the ACD CMO. The CCR form and procedure for processing CCRs are included in Appendix F. Changes are accomplished by approval of the CCR and completion of all change actions required for closure.

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Changes to released drawings are initiated by submittal of an Engineering Order (EO) to the ACD CMO for processing. See Appendix G for drawing control procedures and Appendix H for EO processing procedures. CMO personnel will ensure that released drawings which are available for viewing or for hard copy will have all outstanding EOs "attached" to baselined drawings.

4.3 Change Classification

All proposed changes to ACD Instrument program documentation submitted to the CCB for consideration are designated as Class 1 or Class 2 changes.

- Class I change requests and all deviation/waiver requests are submitted to the ACD Instrument Program CCB, through the CMO, for processing and disposition.
- A CCR shall be submitted to the ACD Project Office for approval before implementation for an approved Class I change that impacts mission safety, the spacecraft interface, an instrument milestone, or total instrument project cost.
- Class II changes are approved by the Systems Assurance Manager (SAM) and Systems Manager, as appropriate, but copies are submitted to the ACD CMO for verification of class and for status accounting input.

Class I Changes

A Class I change is a proposed change that impacts the form, fit, function, interfaces, weight allocation, science performance, cost (>50K), or instrument schedule of a baseline configured item. Class 1 changes must be submitted for Configuration Control Board (CCB) approval.

Class II Changes

Class II changes shall be limited to substitution of equivalent parts, clerical errors, or clarification additions.

4.4 Deviation/Waiver Requests

Requests for a deviation or waiver to any baselined ACD document are submitted to the CCB, through the ACD CMO, on a CCR form. Procedures for processing deviations and waivers are described in greater detail in Appendix I.

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5.0 Configuration Status Accounting and Reporting

Configuration status accounting of the instrument is defined as the recording and reporting of significant information needed to effectively manage configuration items of the instrument and includes the reporting of all such information to personnel and organizations associated with the program.

In order to provide this status accounting, the CMO will maintain an established relational database known as **(The Configuration Management System has not been agreed upon at this time)** to compile, link data to their respective records, and report the status of all ACD activity pertinent to changes, deliverables, drawings, documents, Configured Articles Lists (CALs), and associated action items. Team members have access 24-hours/day to this database via the ACD Instrument homepage on the World Wide Web (WWW). The site information currently is:

6.0 Configuration Verification

Configuration verification is accomplished by final inspection of the flight instrument and documentation review at each configured level of development to ensure ACD data products depict the approved "as-built" configuration of the instrument.

APPENDIX A

CONFIGURATION MANAGEMENT OFFICE RESPONSIBILITIES

1.0 Purpose

The purpose of this appendix is to establish the responsibilities of the Configuration Management Office (CMO) for fulfilling CM requirements as set forth by this Configuration Management Plan (CMP) and GMI 8040.1A, in support of the ACD Instrument Program.

2.0 Responsibilities

The CMO will:

- Ensure the requirements of the CMP are adhered to;
- Exist as the central repository for all original ACD Program master documentation and the repository from which controlled CM data is disseminated to the project team;
- Serve as the central repository, providing safe storage, for all the CM data original products;
- Serve as the central location for the processing of all configuration changes, ensuring appropriate review;
- Provide the secretary for the (CCB) and coordinate all CCB-related documentation (i.e., meeting notification, agenda, minutes), as described in Appendix B;
- Establish numbering systems for documentation, CCRs, and EOs and control their dissemination;
- Act as liaison among program personnel, contractors, and higher levels of authority, particularly when interfaces are impacted;
- Verify all changes are properly incorporated into affected documents and drawings, once approved;

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- Maintain and control all program documentation;
- Provide guidance to preparers of CM documentation;
- Provide complete status accounting for change activity, documentation, drawings, and action items;
- Prepare and maintain a Configured Articles List (CAL), that includes an as-built drawing list with any deviations or waivers;
- Perform periodic audits, in conjunction with the Systems Assurance Manager, if required; and
- Provide assistance to product assurance to verify configuration of deliverable items prior to delivery.

APPENDIX B

CONFIGURATION CONTROL BOARD

1.0 Purpose

The ACD Instrument Program shall formally control changes to all baselined items. This control shall be administered through a CCB and the ACD CMO. The purpose of this appendix is to define the duties and responsibilities of the Configuration Control Board (CCB) for the ACD Instrument.

2.0 CCB Responsibility

The CCB members have the responsibility for making recommendations to the Instrument Manager for approving, rejecting, or deferring for further study, each Configuration Change Request (CCR) submitted to the Board by program team members. If required, CCR originators shall present and defend their recommendations to the CCB. If any of the required personnel are in the field at the time a CCB is held, they shall participate via teleconference.

The CCB will be responsible for reviewing each proposed change from all aspects, (technical, interface, operational, logistics, schedule, cost, contractual) for the program. Also, they shall evaluate, disposition, and document actions for proposed changes. Although members' responsibility and authority may differ, each voting member shall have an equal vote in the CCB. Final decisions on all CCB recommendations will be the responsibility of the Instrument Manager (CCB Chairperson), who will provide signature approval or disapproval of all change actions submitted to the CCB.

3.0 Membership of the Configuration Control Board

The following personnel shall comprise the membership of the Configuration Control Board:

Standing Members:

Instrument Manager (Chairperson)
Instrument Scientist
Instrument Systems Engineer
Systems Assurance Manager
Configuration Management Analyst (Secretary)

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Ad Hoc Members:

Safety Manager
Lead Engineers
Resource Management Officer
Project Planner
Any Expertise/Discipline as needed

4.0 Membership Responsibility

4.1 CCB Chairperson Responsibilities

The CCB chairperson will:

- Preside over all CCB meetings;
- Appoint additional members to the CCB, as the project warrants, for both the standing and the ad hoc membership;
- Authorize the scheduling of regular and emergency CCB meetings;
- Authorize the Out of Board processing of CCRs;
- Resolve any class designation, effectively, or approval requirement disputes;
- Ensure that potential financial, manpower, and schedule impacts of all proposed changes have been considered; and
- Make the final approval/disapproval decisions on the CCB change proposal recommendations.

4.2 The CMO Responsibilities

The CMO shall be a non-voting member of the CCB and shall be responsible for the administrative aspects of the CCB/CCR process.

The CMO will:

- Assist individuals in the completion of forms used for change request;
- Forward change requests to appropriate individual(s) for review and direction and approval for processing;

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- Assign tracking numbers and distribute the change requests to identified CCB members for review prior to a scheduled CCB;
- Notify members of the scheduled meeting date, time, location and agenda;
- Perform as recording secretary for the CCB;
- Track and report CCR status; If a CCR is denied, the CMO will notify the CCR initiator;
- Distribute copies of the approved minutes and dispositioned change requests to all CCB members and affected personnel in a timely manner;
- Track action items and ensure that all affected documents and drawings are changed in accordance with CCB direction;
- Ensure all changes are properly incorporated into affected documents and drawings;
- Distribute updated documentation to appropriate individuals.

4.3 The Standing Membership Responsibilities

The standing members of the CCB will:

- Provide thorough technical review of changes submitted to the Board;
- Attend CCB meetings or send a designated alternate; and
- Recommend approval or disapproval of the change.

4.4 Ad Hoc Membership Responsibilities

Ad hoc members to the CCB will:

- Review proposed changes based on their particular expertise;
- Support meetings when specifically requested; and
- Recommend approval/disapproval of proposed changes.

APPENDIX C

RESPONSIBILITIES OF SUPPORTING ORGANIZATIONS

1.0 Instrument Baseline and Product Control

The instrument baseline for the instrument designs will be established at specified design reviews such as the Preliminary Design Review (PDR), Critical Design Review (CDR), or other approved milestones.

1.1 Baseline Documents

Responsibility for developing the baseline documents (specifications, schematics, drawings, processes, material/parts lists, software programs and test procedures) resides with the Instrument Manager and his lead engineers or designees in other GSFC functional organizations. The maintenance of the baseline documentation, working in conjunction with the responsible discipline/lead engineers, resides with the configuration management support group.

Lead engineers have the responsibility to verify that all approved changes are reflected in the applicable documents, drawings, and procedures.

1.2 Subsystem Integration and Test

The individual or supporting organization responsible for the assembly and test of the major instrument subsystems will implement procedures, in compliance with Code 300, Office of Flight Assurance (OFA) requirements, that will properly identify and control the flight hardware subsystems during the assembly and test phase.

1.3 Final Integration and Test

During the final instrument integration and test phase, when the subsystems are assembled in the instrument and made operational, the responsible organization will also implement procedures that identify and control flight hardware.

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1.4 Instrument Assembly and Test Procedures

Instrument assembly and test procedures for instrument flight hardware will include the following as a minimum:

- Assembly forms (i.e., shop records/travelers, cert logs, work orders), fully identifying flight hardware.
- Installation and removal logs with Flight Assurance sign-offs.
- Flight hardware operating time logs during assembly, test, and final integration.
- Flight Instrument Log.
- Flight connector mate/de-mate logs.

APPENDIX D

CONTRACTOR ORGANIZATIONS REQUIREMENTS

1.0 Purpose

The purpose of this appendix is to define the Configuration Management (CM) requirements for contractors supporting the ACD Instrument Programs Office (IPO).

2.0 Requirements

Contractors shall implement a CM system that is compatible with the GSFC CM practices, as outlined in ACD-CM-6001.

Each Instrument Program contractor shall derive a list of lower-level Configuration Items (CI) from the Deliverable List. These CI's shall be subject to contractor CM requirements and procedures. The contractor's CI list shall be explicitly documented in the contractor's CM Plan, and shall be subject to IM approval.

Each contractor shall establish baseline documentation for the instrument products under his/her control. The appropriate specifications, drawings, and other documentation defining the CI, shall be generated and placed under configuration control.

All Class 1 changes shall require GSFC approval prior to implementation. Copies of all Class 2 changes will require Instrument CCB review for concurrence of classification.

Copies of all contractor changes to baseline drawings shall be submitted to GSFC using the contractor's Engineering Change Proposal (ECP), or equivalent.

APPENDIX E

DOCUMENT CONTROL

1.0 Purpose

The purpose of this appendix is to describe the ACD Instrument documentation system. This documentation system will be administered by the Configuration Management Office (CMO) and shall be applicable to all documentation generated and maintained current on the ACD program.

2.0 Document Numbering

Document identification numbers shall be assigned by the CMO for all GSFC generated documents by using the scheme described below:

| PROJECT ACRONYM | DOCUMENT TYPE | SERIES SEQUENCE NUMBER |
|--------------------|------------------|---------------------------|
| ACD | XXXX | X000 |

Document types are defined below:

| | |
|---------|--|
| ANYS = | Analyses |
| ICD = | Interface Control Documents |
| LEGL = | Legal Documents, MOAs, SOWs |
| LOG = | Logbooks |
| MGMT= | Management |
| MPML = | Mechanical Parts and Materials List |
| MISC = | Miscellaneous |
| OPS = | Mission Operations Documents |
| TEST = | Test Plans |
| PROC = | Procedures |
| REQ = | Requirements Documents |
| QA = | Quality Assurance Document |
| RE VW = | Review Packages (CDRs, PDRs) |
| SPEC = | Design Specifications |
| TEV = | Test & Evaluation Documents/Verification Plans and Reports |
| TM = | Technical Memos |
| RPT = | Reports (Test, Analysis ect) |
| WI = | Work Instructions |

The sequence numbers shall be assigned based on document type as a request for document numbers is received. The revision letter is advanced in alphabetical order as approved revisions are incorporated into the document.

3.0 Document Release

When a document is ready to be baselined and officially released, it should be submitted to the ACD Program CMO. The CM Office shall assist in the signature process, if requested. After a document has been approved by all necessary project members it is considered "baselined" and, therefore, under CM control.

Officially released documents will have a control stamp marking (showing it's a product of the GSFC ACD Program CMO) and the date of release, along with the initials of the CMO who released the document.

Once baselined, the CMO shall maintain the original document, the word-processing file (which shall be supplied by the individual submitting the document). Word-processing files are then "linked" via the (?????) (see Appendix J) to the Program Homepage, where they can be viewed by all team members.

If documents are not to be baselined for some time, preliminary versions can be submitted for reference purposes, and will be stamped as such.

4.0 Document Change Control

The CMO shall be responsible for the change control process only. Processing of changes to baselined (under CM control) documents is to be completed by the originator of the document. All document changes will require the approval of the original approval disciplines, and should be submitted to the CMO on a CCR form. These forms are available from the CM Office and are also available online.

4.1 Document Change Record

Each controlled document shall contain a Document Change Record (DCR) preceding the documents Table of Contents (see Figure 4). This DCR shall be updated and released with each change or revision incorporated into the document. The DCR will identify the revisions by letter and the changes by number and the date and number of the Configuration Change Request (CCR) that authorizes the revision or change.

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DOCUMENT TITLE

DOCUMENT CHANGE RECORD

| Revision/ Change | Description of Change | Pages Affected | Date | Approval |
|-----------------------------|--|---------------------------|-------------|------------------|
| - | Baseline Release of Document | All | 1/10/96 | RBF |
| Ch. 1 | Mechanical Requirements (Section 5.0) updated per ACD-CCR-015 | 5 | 2/14/96 | RBF |
| Ch. 2 | Update to Stress Analysis (Section 3.4) per ACD-CCR-019 | 3 | 2/20/96 | RBF |
| A | Incorporated changes per ACD-CCR-025 | All | 6/12/96 | initials here |
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Figure 4: Sample Document Change Record (DCR) Form

APPENDIX F

PROCESSING OF CONFIGURATION CHANGE REQUESTS

1.0 Purpose

The purpose of this appendix is to describe the method for processing Configuration Change Requests (CCRs).

2.0 Review and Approval Process

CCRs (or adequate information for the CMO to prepare a CCR) will be submitted to the CMO for processing. Figure 5 depicts the CCR processing flow.

- All CCRs should be as complete as possible, with cost, schedule, design, and documentation impacts identified. The CMO assigns the CCR a number and enters it into the database, from which time it is tracked throughout its lifetime. The CCR form is shown in Figure 6.
- CCRs should contain technical information in sufficient detail to determine the merits of the requested change. Documentation changes should be identified and rough copy attached to the CCR where possible.

The CMO reviews the CCR for accuracy and completeness and distributes the request for change, with all supporting documentation attached, to all disciplines, which might be impacted, for inputs. As the returned inputs are received, the CMO will attempt to resolve any conflicts which might result from individual inputs prior to a CCB meeting.

The CCB Chairperson, will convene a CCB to discuss and disposition each CCR. CCB decisions, together with any action or follow-up, will be coordinated by the CM office.

If higher authority disposition is required, e.g., changes impacting mission safety, spacecraft interface, instrument schedule, or total program cost, the CCR will be forwarded to the ICESat Project Office for approval.

The CMO will prepare and distribute minutes of the CCB, implement all documentation changes, provide copies to holders of the documents, and monitor resolution of any other action items. The CMO will document close-out activity and maintain current the CCR status report.

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Figure 6: Configuration Change Request (CCR) Form (Page 1)

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Figure 6: Configuration Change Request (CCR) Form (Page 2)

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APPENDIX G

DRAWING CONTROL

1.0 Purpose

The purpose of this appendix is to describe the methods used for assigning drawing numbers, revising drawings, and overall drawing control.

2.0 Drawing Number Assignment

Drawing numbers shall consist of assigned, basic seven-digit numbers, prefixed by the letter "G" (identifying it as a GSFC drawing) and a second letter signifying the drawing size (A, B, C, D, E, F, or J).

Blocks of official drawing numbers are issued by the Mechanical Engineering Branch, Code 543, and shall be obtained by the CMO for distribution to project team members or organizations during the design phase.

3.0 Drawing Release

Upon completion of the Mission Critical Design Review and establishment of the instrument baseline, approved drawings will put under Configuration Change Control and officially released.

The CM Office shall assist in the review/signature process in the following manner:

Drawing Files will be sent via email (or FTP) to the CM Office when the drawing is ready for review. It is requested that all files be sent in a ".EPS" (encapsulated post script) or ".PS" (post script) format.

Individuals needing to review the drawing(s) will be able to do so electronically by accessing the ACD homepage, where the drawings will be available in a "review" location.

After review, the responsible individuals will electronically "sign" the drawing by marking an "X" in the appropriate location (using their assigned password) if they approve the drawing. If there are any problems with the drawing, the CM Office should be notified immediately, so that any conflict can be resolved.

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The CM Office will then be responsible for notifying the draftsman of the correct names, initials, and approval dates so that an updated file can be forwarded to the CM Office.

The CMO will verify that the drawing format is in compliance with the GSFC Engineering Design Standards Manual (X-673-64-1F). Officially released drawings will have a control stamp marking (showing it's a product of the GSFC ACD Instrument CMO) and the date of release, along with the initials of the CMO who released the drawing.

Once baselined, the CMO shall maintain drawing originals (if requested), CAD files (which shall be supplied by the individual submitting the drawing), and distribute copies to the appropriate individuals, upon request. Drawing files will be sent via email (or FTP) to the CM Office when the drawing is ready for release.

The drawing will then be added into the CoMITS database in the "controlled" area and the drawing file will be "linked" to the record. At this point, the drawing can be accessed from the "controlled" or released area by all team members (see Appendix J for further details).

If drawings are not to be baselined for some time, preliminary versions should be submitted for reference purposes and will be stamped as such.

4.0 Revisions

It is the responsibility of the originator of the change to submit an EO prior to changing a drawing. The individual initiating the change must complete an EO and submit it to the CMO for processing. This form must be submitted and approved prior to making any changes to the original drawing.

Revisions to drawings shall automatically be made once five EOs have accumulated. The methodology for revising drawings is described in the GSFC Engineering Design Standards Manual (X-673-64-1F). All drawings will comply with the engineering drawing manual.

5.0 Multi-sheet Revisions

The following method excerpted from the engineering drawing manual (X-673-64-1F) will be used for revising multi-sheet drawings:

7.3 Revision of Multi-sheet Drawings

Revisions to any sheet(s) shall be recorded in the revision description block on sheet 1, and reference shall be made to sheet(s) affected. Level of revision shall be changed on each drawing sheet whether or not that particular sheet is affected. The revision description block on all sheets other than sheet 1 shall state "See sheet 1 for revision".

APPENDIX H

PROCESSING OF ENGINEERING ORDERS

1.0 Purpose

The purpose of this appendix is to describe the method for processing an engineering order (EO) for the modification of a released drawing.

2.0 EO Number Assignment

All EO numbers are assigned sequentially by the Configuration Management Office (CMO) per drawing number.

3.0 EO Form Submittal

All changes to drawings under Configuration Control must be submitted on an EO Form, as shown in Figure 7. The EO form must be completed as defined in the GSFC Engineering Standards Design Manual (X-673-64-IF).

4.0 Review and Approval Process

Completed EOs, requesting a change, are sent to the CMO to review for completeness and follow-on processing. EOs will be reviewed by designated personnel for the impacted discipline. The Instrument Manager, or his designee, has final approval authority.

5.0 Class 1 Changes

EO Class 1 changes which impact higher-level interfaces shall be forwarded as an attachment to a Configuration Change Request (CCR) and follow the approval cycle described in Appendix F.

6.0 EO Incorporation

Up to five (5) unincorporated EOs may be accumulated before a drawing revision is initiated. All unincorporated EOs are attached to drawings until the drawing is revised.

7.0 EO Files

All original EOs, that have been approved, will be logged and filed. Unincorporated EO copies will be provided with any drawing copy requests.

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Figure 7: Engineering Order (EO) Form (Page 1)

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Figure 7: Engineering Order (EO) Form (Page 2)

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APPENDIX I

DEVIATIONS AND WAIVERS

1.0 Purpose

This appendix defines and explains the procedure for preparing deviations and waivers.

2.0 Definitions

A deviation is a specific written authorization, granted prior to the manufacture or testing of an item, to depart from a particular performance or design requirement for that item.

A waiver is a specific written authorization, granted after manufacture or testing of an item, to accept a departure from a particular performance or design requirement for that item.

3.0 Classifications

- Minor - does not materially reduce usability of the end item.
- Major - affects baselined documentation, technical requirements, non-technical contractual provisions, Government Furnished Equipment (GFE), interfaces, or retrofit.
- Critical - affects requirements involving health or safety.

All requests for deviations/waivers shall be submitted to the Configuration Management Office (CMO) for processing through the Configuration Control Board (CCB) on a Configuration Change Request (CCR) form. A deviation or waiver will not revise the requirement, but it will be appended to applicable documentation for information and traceability.